

Remarks

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendment and following remarks are respectfully requested.

Claims 1-9 are pending in the application, with Claims 1 and 6 being independent. Claims 6-8 are withdrawn from consideration. Claim 1 has been amended herein.

Claims 1-3 and 9 were rejected under 35 U.S.C. § 103 as being unpatentable over European Patent Application No. 0 709 222 (Yoshino et al.) and European Patent Application No. 0 701 904 (Eguchi et al.). Claims 1, 4 and 5 were rejected under § 103 as being unpatentable over Yoshino et al. and Eguchi et al. in further view of U.S. Patent No. 5,104,730 (Misuda et al.) or the discussion in Applicants' specification at page 4. These rejections are respectfully traversed.

As is recited in independent Claim 1, the present invention relates to a recording medium including a substrate and an ink-receiving layer provided on the substrate. The ink-receiving layer essentially consists of a binder and an alumina hydrate obtained through a quenching step. The alumina hydrate has a boehmite structure and a flat plate form, an average particle thickness of 3.0 to 5.0 nm and a crystallite size of 5.0 to 8.0 nm in a direction of a (020) plane. The crystallite size in the direction of the (020) plane is greater than the average particle thickness by at least 1 nm, and the recording medium has a degree of parallelization of 30 to 1,000.

The alumina hydrate of the present invention can have a self-film-forming property. As described in the specification, for example at page 26, line 20 to page 27, line 11, this self-film-forming property can be identified by the degree of cracks when only an alumina hydrate slurry is applied on a film by die-coating and dried. The alumina hydrate of the present invention, which is different from conventional alumina hydrate, has a remarkably unusual characteristic in that film-forming can be achieved with pigments and the alumina hydrate alone. In other words, film-forming can be achieved without using any binder. A recording medium formed with the alumina hydrate having self-film-forming properties has a tremendously high degree of parallelization as compared with conventional examples (for example, Eguchi et al. discloses a maximum degree of parallelization of 3.5). Additionally, not only does the alumina hydrate of the present invention have excellent coating properties (it does not cause coating defects), but it also is effective in solving technical problems such as curling after printing, blow marking and anti-folding properties. The prior art pigments per se do not solve these problems.

Applicants first revealed the correlation between the self-film-forming property and the degree of parallelization. The degree of parallelization, as defined by the present invention, can only be achieved when using the alumina hydrate of the present invention, and the benefits of the present invention are unexpected based on the teachings of the cited references.

Neither Yoshino et al. nor Eguchi et al. teach or suggest a self-film-forming property of an alumina hydrate slurry. Neither reference teaches or suggests that an alumina hydrate slurry can show a self-film-forming property by setting the relationship

between the crystallite size range and the range of the average particle thickness of the alumina hydrate. Additionally, neither Yoshino et al. nor Eguchi et al. teach or suggest that a high degree of parallelization decreases curling after printing and blow marking and improves anti-folding properties.

Moreover, neither Yoshino et al. nor Eguchi et al. teach or suggest an average particle thickness of 3.0 to 5.0 nm and a crystallite size of 5.0 to 8.0 nm in a direction of a (020) plane, the crystallite size in the direction of the (020) plane being greater than the average particle thickness by at least 1 nm.

Accordingly, Applicants conclude that Eguchi et al. and Yoshino et al. do not teach or suggest the claimed invention.

Misuda et al. was cited for teaching the use of a layer of silica powder over a layer of pseudo-boehmite in a recording medium. The discussion at page 4 of Applicants' specification was cited for teaching the use of a silica layer to reduce scratching. Applicants submit that neither reference remedies the deficiencies of the combination of Eguchi et al. and Yoshino et al. Accordingly, Applicants submit that none of the cited references, whether taken alone or in combination (assuming such a combination is proper) anticipates or renders obvious the present invention as recited in Claim 1.

Thus, independent Claim 1 is patentable over the citations of record. Reconsideration and withdrawal of the § 103 rejections are respectfully requested.

For the foregoing reasons, Applicants respectfully submits that the present invention is patentably defined by independent Claim 1. Dependent Claims 2-5 and 9 are

also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Mark A. Williamson', written over a horizontal line.

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